AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0220] with the following amended paragraph:

The total DNA isolated by ~~DNAzol~~ **DNAZOL™** (Mol.Res.Center, Inc., Cincinnati, OH) or bound on FTA blood staining collection cards (Life Technologies, Inc., Gathersburg, MD) serves as a template for the polymerase chain reaction (PCR). In the first variant, the PCR assay uses a set of specially designed primers (50 pmol), immobilized on solid matrix of microplates and amplifies a specific cDNA sequence (620 bp) coding the NR2A glutamate receptor. In a second variant, the PCR assay uses a master ready-to-use buffer and amplifies cDNA bond on FTA paper. Following amplification, the quantity of a product is determined by enzyme or non-enzyme color reaction with a substrate.

Please replace paragraph [0221] with the following amended paragraph:

Using the ~~DNAzol~~ **DNAZOL™** reagent for DNA isolation, the whole blood of each individual (0.5 ml) was combined with 1 ml ~~DNAzol~~ **DNAZOL™** (Mol.Res.Center, Inc., Cincinnati, OH) for 5 min at room temperature and lysed (Mackey K. et al. Mol.Biotechnol. 9: 1-5 (1997). The organic phase (0.4 ml) of each sample was transferred to a clean tube and 0.4 ml isopropanol was added. The mixture was incubated for 5 min at room temperature and centrifugated at 6,000 g for 6 minutes. The pellet was washed in 0.5 ml ~~DNAzol~~ **DNAZOL™** and centrifugated at the same conditions. The total DNA pellet was mixed with 1 ml of 75 % ethanol and centrifuged at 6,000 g for 5 minutes. Then the DNA pellet was diluted in 200 l of 8 mM NaOH and incubated at room temperature for 5 min followed by vortexing. Alkaline DNA solution was then neutralized with 160 l of 0.1 M HEPES, pH 7.4.

Please replace paragraph [0222] with the following amended paragraph:

Immobilization of oligonucleotide probes (primers, SEQ ID NO:8) was performed as follows. A total of 100 l of 3x PBS buffer containing the primers (150 nM) was dropped into each well of a 96-well microtiter plate (Fisher Sci., Suwanee, GA). After incubation for 2 h at 37 °C or overnight at room

temperature, the plate was washed three times with 1x PBS buffer containing 0.05 % (w/vol) ~~Tween 20~~ **TWEEN-20™ (polysorbate 20)**. The oligonucleotide-coated plates were stable for 2 months at 4°C.

Please replace paragraph [0230] with the following amended paragraph:

A quantitative analysis of the level of NR2A autoantibodies in serum samples was performed by enzyme-linked immunosorbent assay (ELISA) (Ngo, T.T. and H.M. Lenhoff, *FEBS Lett. 116*:285-288 (1980)). The diluted blood sera (1:50) and polyclonal antibodies to the NR2A peptide as a standard (0.01 ng/ml-400 ng/ml) were applied to the immunosorbent. The plate was incubated for 1 h at 25° C and then washed by 0.05 *M* phosphate buffer, pH 7.4, containing 0.05% of TWEEN-20™ **(polysorbate 20)**. Rabbit antibodies to the human immunoglobulin labeled with horseradish peroxidase were added (Sigma, St. Louis, MO; 1:1000), and the plate was incubated for 1 h at 25° C. After incubation the wells were washed twice in the same buffer. The reaction was revealed by *o*-phenylenediamine in 0.05 *M* citrate buffer, pH 4.3 monitored at 490 nm on a microplate reader (BioRad, UK). The titer of NR2A autoantibodies in blood serum was determined by ELISA using a standard curve of the absorbence units of NR2A autoantibodies versus their concentration in a microtiter well plate.

Please replace paragraph [0236] with the following amended paragraph:

The enzyme-linked immunosorbent assay (ELISA) of autoantibodies is carried out as follows: the samples of the blood serum diluted 1:40 or 1:50 are applied to the respective immunosorbent. Then the plate carrying the immunosorbent is incubated for 30 min at 37°C, whereupon the wells of the plate are washed with a 0.05 M phosphate buffer, containing 0.05% of ~~Tween 20~~ **TWEEN-20™ (polysorbate 20)**. Rabbit antibodies to human immunoglobulin labeled with horseradish peroxidase (conjugate) are added thereto, and the plate is reincubated for 35 min at 37°C, then washed by the aforementioned buffer and distilled water. The reaction with conjugate is determined by adding chromogen, *i.e.,* orthophenylenediamine in the presence of 30 % hydrogen peroxide. The intensity of color development is evaluated by using the rider (available Multiskan microplate rider) at the 492 nm wavelength.

Please replace paragraph [0080] with the following amended paragraph:

It is also practicable to produce the immunosorbent by fixing the respective fragment of the receptor protein on nitrocellulose strips by virtue of ionic interaction. The respective fragment of the receptor protein isolated from the mammals' brain is applied to nitrocellulose and incubated for 15 min at 37°C. Then nitrocellulose is washed with a 0.5 % solution of ~~Tween 20~~ **TWEEN-20™ (polysorbate 20)**, and the resultant immunosobent is dried at room temperature and stored in dry place for one year period.